4 Sensor Backup Obstacle Sensing System
Model: ACAB104

Users Manual

Features:

- Four reversing sensors detect obstacles between 1- 7 feet
- Includes 0°, 5°, and 10° angle sensor sleeves to fit most bumpers
- Activates only when vehicle is in reverse
- Will not drain battery or void factory warranty
- Includes speaker/buzzer with 3 settings - high, low, and off
- Four detection zones give the following warnings:
  - 1 = slow beep within 5-7 feet
  - 2 = medium beep within 3-5 feet
  - 3 = fast beep within 1-3 feet
  - 4 = steady tone within 1 foot
- Works with any vehicle

Warnings

This product is intended to assist in safe driving by signaling the driver of obstacles behind the vehicle while the vehicle is in reverse. You, as the driver, are solely responsible for the safe operation of your vehicle and the safety of your passengers according to your local traffic regulations. Do not use any features of this system to the extent it distracts you from safe driving. Your first priority while driving should always be the safe operation of your vehicle. Audiovox Electronics Corporation cannot accept any responsibility whatsoever for accidents resulting from failure to observe these precautions or safety instructions.

1. This product utilizes high voltage. Any unauthorized modifications or damage to the product may result in electrical shock. Handle all components with care. Inspect regularly for damage to components and cabling.

2. You are responsible for ensuring that the installation of this product does not void or affect the vehicle manufacturer's warranty. Audiovox Electronics Corporation or its subsidiaries are not liable in full or in part for improper installation resulting in loss or damage to your property, or for voiding all or part of the vehicle manufacturer's warranty.

3. Do not apply excessive force to any of the components contained within this kit. Excessive force used before, during or after installation that results in a damaged or non-functional part will void all warranties.

4. Please follow the procedures in this installation manual. Improper installation or modification of this product will void all warranties.

Product Description

This 4 Sensor Backup Obstacle Scanning System is designed to assist the driver by providing an alert when an object is behind the vehicle whenever the vehicle is shifted into reverse. Never rely solely on this product to ensure the area is clear of children and/or obstructions. This product is not intended to replace existing safety procedures, but rather to add an additional safety tool for your vehicle.

Using the Sensor System

Your four sensor backup obstacle sensing system transmits and receives ultrasonic waves from the four sensors mounted in your vehicle's rear bumper. As the transmitted waves bounce off obstacles behind your vehicle and are received back by the sensors, the unit's control box converts these waves into warning sounds, or beeps, which alerts you, the driver, of obstacles behind your vehicle.

Your four sensor backup obstacle sensing system will signal in five increasing warning tones (beeps) which correlates the vehicle's distance from an obstacle. When the vehicle's reverse gear is engaged, the system will emit a quick beep. This indicates that the system is on and the sensors are operating. The following chart shows the detection range and beep associated with the distance of an object from the rear bumper.

Distance (meter)	Distance (feet)	Type of Beep
>1.5	>4.9	No beep
1.5-1.0	4.9-3.3	Slow repeating beep
1.0-0.7	3.3-2.3	Medium repeating beep
0.7-0.4	2.3-1.3	Faster repeating beep
<0.4	<1.3	Solid beep

When towing a trailer, the system will emit a solid beep. Move the switch on the speaker to the "off" position to turn off the speaker. Remember to turn the switch to the "high" or "low" position when the vehicle is not towing a trailer.

Specifications

Power Supply	DC12V
Current Draw	<180mA
Detecting Distance	1 to 7 ft
Sensor Cable Length	23 ft
Control Box Size	4.125”x 3”x .830”
Operating Temperature Range	-40°F~ 176°F

Maintenance

Though your backup system requires minimum care, you should maintain its condition and performance using the following the guidelines:

- Keep the control box away from moisture, extreme heat or cold.
- Keep the sensors free from snow, ice, and debris.

Troubleshooting

Problem	Solution
System does not beep when reverse gear is engaged and object is in range	1. Check if ignition/reverse light on 2. Check power cable connection 3. Check switch on speaker
System beeping without obstacle behind vehicle	1. Remove anything mounted on the vehicle higher than the sensor 2. Verify sensor is installed at the correct height 3. Verify sensor is in the correct position 4. Check all connections 5. Reduce sensitivity
Low sensitivity	1. Clean sensors 2. Check all connections 3. Check if voltage is normal 4. Set sensitivity to high
Re-start often	Poor contact of power cable or ground
No obstacles present and system is beeping	Check sensors for snow, ice, heavy rain, and/or debris

12 MONTH LIMITED WARRANTY

Applies to Audiovox Mobile Video Products

AUDIOVOX ELECTRONICS CORP. (the Company) warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with reconditioned product (at the Company's option) without charge for parts and repair labor. A game controller, if supplied, is similarly warranted for ninety (90) days.

To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to the Company at the address shown below.

This Warranty does not extend to the elimination of externally generated static or noise, to correction of antenna problems, to costs incurred for installation, removal or reinstallation of the product, or to damage to digital memory/media devices, gaming devices, discs, speakers, accessories, or vehicle electrical systems.

This Warranty does not apply to any product or part thereof which, in the opinion of the Company, has suffered or been damaged through alteration, improper installation, mishandling, misuse, neglect, accident, or by removal or defacement of the factory serial number/bar code label(s). THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

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